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LTTngTop: Human-Readable Trace Viewer

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> Presenter

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> Content

- LTTng 2.0 features
- LTTngTop overview
- Work in progress
- Demo
- Future

> LTTng 2.x features

- Low-impact kernel and user-space tracer
- TRACE_EVENT support
- Perf PMU counters support
- Kprobes support

> LTTngTop Overview

- Sysadmin-oriented kernel trace viewer
- Gather statistics only from kernel events (no constant /proc hammering)
- Lightweight and console-based (ncurses)
- top-like look and feel
- CPU usage, I/O statistics, Perf PMU counters evolution per-process

> LTTngTop Overview

- Replay the recorded trace at the same rate it happened
- Pause and navigate back and forth in the history
- Display the state of the system at any point in time (CPU usage, opened files, bandwidth, process creation/termination, etc)

> LTTngTop use-cases

- Sysadmin
  - Hard to reproduce bugs (happens sometimes, disappears by itself)
  - Detailled statistics per-process at any point in time (including opened files)
- Developper
  - Quickly isolate interesting events from a given trace and then read its text dump?

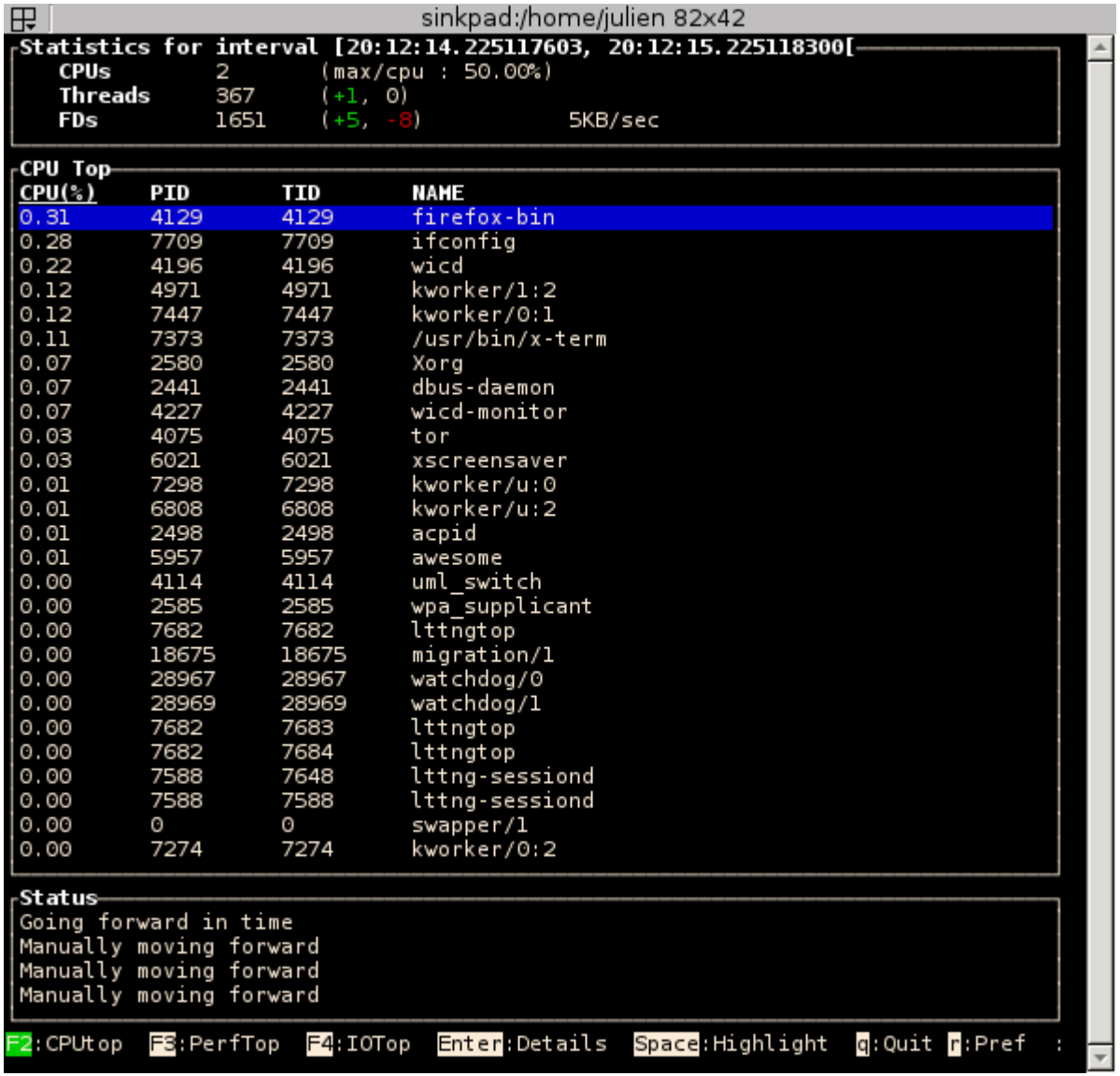
> LTTngTop Work in Progress

- Live tracing/viewing !
- Containers support (LXC) :
  - vpid/vtid/vppid
  - nesting and hierarchy support
- Viewer-side filtering :
  - selected processes (with/without childs)
  - selected container (with/without nesting)

> LTTngTop Work in Progress

- “Attach” to a live process (graphical and textdump like strace without ptrace overhead)
- CPU hotplug support
- On-the-fly Perf PMU counters activation
- On-the-fly kprobe registration (and hit stats)

> LTTngTop Demo



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> LTTngTop Future

- More analysis modules (feedbacks and suggestions welcomed !)
  - Separate disk vs network I/O
  - Disk latency analysis
- Clean integration of the live tracing feature with lttng-tools and babeltrace

> LTTngTop Future

- Separate the analysis modules from the core to allow the use in “desktop widgets”, snmpd, etc.
- Large-scale data center use-cases :
  - Remote traces live analysis (monitoring, trending and debugging)
  - Distributed analysis computation
  - High-level to fine-grained view

> Questions ?

LTTngTop available at http://lttng.org

git clone -b lttngtop-live git://git.dorsal.polymtl.ca/~jdesfossez/lttng-tools

git clone -b lttngtop-live git://git.dorsal.polymtl.ca/~jdesfossez/babeltrace

git clone -b live git://git.lttng.org/lttngtop.git

http://www.efficios.com